



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,680	06/19/2007	Jae Won You	Q97406	2749
23373 7590 02/17/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER				
BLAKELY HILL, NELSON CLARENCE				
ART UNIT		PAPER NUMBER		
1614				
MAIL DATE		DELIVERY MODE		
02/17/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/599,680

**Applicant(s)**

YOU ET AL.

**Examiner**

NELSON C. BLAKELY III

**Art Unit**

1614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 2-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)
- Paper No(s)/Mail Date 10/05/2008
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Application Status***

Claims 1-7 of the instant application are pending. Claims 2-5 are withdrawn pursuant to Applicant's Amendment, filed 12/16/2008. Accordingly, instant claims 1, 6 and 7 are presented for examination on their merits.

### ***Election/Restrictions***

Applicant's election **without traverse** of Group I, drawn to pentaerythritol derivatives represented by the Formula 1, in the reply filed on 12/16/2008, is acknowledged.

Claims 2-5 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without traverse** in the reply filed on 12/16/2008.

Applicant's election **with traverse** of the species election requirement, wherein pentaerythritol ethoxylate (15/4 EO/OH) glycolic ester ethoxylate lauryl ether (pentaerythritol ethoxylate (15/4 EO/OH) laureth-6 carboxylate) was elected, in the reply filed on 12/16/2008, is acknowledged. The traversal is on the ground(s) that no burden would exist if the election requirement were not maintained. Furthermore, Applicants respectfully submit that all species in the **currently amended** claim 1 have a common property or activity, and a significant structural element is shared by all of the species. This is found persuasive in light of Applicant's Amendment, filed 12/16/2008, and the election of species requirement is **withdrawn**.

***Priority***

Receipt is acknowledged of foreign application no. KR 10-2004-0024704, filed 04/10/2004, submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. It is noted that Applicant has not provided an English translation of the aforementioned priority application. Applicant is encouraged to supply the missing translation.

***Information Disclosure Statement***

The Information Disclosure Statement, filed 10/05/2006, is acknowledged and considered to the extent that each reference is a proper citation on a US patent.

The Information Disclosure Statement, filed 10/05/2006, fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because Applicant has not provided, at least, the Abstract, in English, of the three foreign patent documents listed. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this Information Disclosure Statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

### ***Applicant's Amendment***

Applicant's Amendment, filed 12/16/2008, wherein instant claims 1 and 2 are amended, is acknowledged.

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The disclosure is objected for of the following informality:

The specification (including the abstract and claims), and any amendments for applications, except as provided for in 37 CFR 1.821 through 1.825, must have text written plainly and legibly either by a typewriter or machine printer in a non-script type font (e.g., Arial, Times Roman, or Courier, preferably a font size of 12) lettering style having capital letters which should be at least 0.3175 cm. (0.125 inch) high, but may be no smaller than 0.21 cm. (0.08 inch) high (e.g., a font size of 6) in portrait orientation, and presented in a form having sufficient clarity and contrast between the paper and the

writing thereon to permit the direct reproduction of readily legible copies in any number by use of photographic, electrostatic, photo-offset, and microfilming processes and electronic capture by use of digital imaging and optical character recognition; and only a single column of text. See 37 CFR 1.52(a) and (b).

The application papers are objected to because on page 7, for example, there is a "vertical line of distortion" toward the right side of the page, wherein the words of the text are illegible, at times.

A legible substitute specification in compliance with 37 CFR 1.52(a) and (b) and 1.125 is required.

Appropriate correction is required.

### ***Claim Objections***

Claim 1 is objected to for the following informalities:

The indicators for the substituents, i.e., R, m and n, in formula 1 are illegible. Additionally, Applicant is encouraged to be consistent by using either the recitation "formula 1" or "Formula 1" with regard to the text in line 2 of claim 1 and the title of the illustration in claim 1, respectively.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The instant claims 1, 6 and 7 recite the limitation, "derivatives", in reference to the instantly claimed compound pentaerythritol. Applicant has not described the claimed genus of "derivatives" in a manner that would indicate Applicant was in possession of the full scope of this genus, or describe of what this genus is comprised. The instant specification on page 1, lines 7 and 8, discloses wherein the present invention relates to pentaerythritol derivatives represented by the following formula 1. Additionally, Applicant recites in Examples 1-42, other "derivatives" of the invention. This exemplification is not a definition that allows the Examiner, or one of ordinary skill in the art, to ascertain that Applicant was in possession of the full scope of this genus.

Regarding the requirement for adequate written description of chemical entities, Applicant's attention is directed to the MPEP § 2163. In particular, *Regents of the University of California v. Eli Lilly & Co.*, 119 F.3d 1559, 1568 (Fed. Cir. 1997), cert. denied, 523 U.S. 1089, 118 S. Ct. 1548 (1998), holds that an adequate written description requires a precise definition, such as by structure, formula, chemical name, or physical properties, "not a mere wish or plan for obtaining the claimed chemical invention." *Eli Lilly*, 119 F.3d at 1566. The Federal Circuit has adopted the standard set

forth in the Patent and Trademark Office ("PTO") Guidelines for Examination of Patent Applications under the 35 U.S.C. 112.1 "Written Description" Requirement ("Guidelines"), 66 Fed. Reg. 1099 (Jan. 5, 2001), which state that the written description requirement can be met by "showing that an invention is complete by disclosure of sufficiently detailed, relevant identifying characteristics, "including, *inter alia*, "functional characteristics when coupled with a known or disclosed correlation between function and structure..." *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 296 F.3d 316, 1324-25 (Fed. Cir. 2002) (quoting Guidelines, 66 Fed. Reg. at 1106 (emphasis added)). Moreover, although Eli Lilly and Enzo were decided within the factual context of DNA sequences, this does not preclude extending the reasoning of those cases to chemical structures in general. *Univ. of Rochester v. G.D. Searle & Co.*, 249 Supp. 2d 216, 225 (W.D.N.Y. 2003).

In the instant case, Applicants have not described the genus of "derivatives" in a manner that would allow one skilled in the art to immediately envisage the compounds contemplated for use. As such, the claims lack adequate written description for the claimed "derivatives".

Claim 1, 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.



A review of the specification fails to disclose the recitation "independently saturated or unsaturated C<sub>6</sub>-C<sub>18</sub> alkyl group" within the definition of R term. See *In re Rasmussen*, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981) and MPEP §2163.06.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to instant claims 1, 6 and 7, the recitation "(Wherein R is independently saturated or unsaturated C<sub>6</sub>-C<sub>18</sub> alkyl group; m and n are the same or different integers of which m is 0 to 10 and n is 1 to 10)" renders the claims indefinite. The rejection is based on parenthetical subject matter. Confusingly, it is unclear to the Examiner, or one of ordinary skill in the art, at the time of the invention, whether or not a claim limitation is intended by the parenthetical subject matter. Applicant is encouraged to amend the claims for the accuracy and precision of the claim language.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linares *et al.* (U.S. Patent No. 5,641,479), in view of Mitsuno *et al.* (U.S. Patent No. 4,767,625), as evidenced by Yokoyama *et al.* (J Wood Sci, Vol. 44, pages 421-422; 1998).

With regard to instant claims 1, 6 and 7, Linares *et al.* disclose, in reference claim 1, a foaming cosmetic cleansing composition comprising: (a) from about 0.1% to about 7.0%, by weight on a solids basis, of an amphoteric surfactant which is an imidazolinium derivative of formula I; (b) from about 0.1% to about 5.0% of a polyol alkoxy ester

wherein the polyols which form the basis for the ester are pentaerythritol, for example; and (c) from about 60% to about 99.5% water. In column 4, lines 29-62, Linares *et al.* disclose examples of polyols which form the basis of the polyol alkoxy esters that include polyols having, at least, 3 hydroxy groups and having from about 3 to about 10 carbon atoms in either a straight or branched chain. In the instant excerpt, Linares *et al.* further disclose wherein the especially preferred polyol is pentaerythritol, and wherein the preferred derivatives contain polyethoxy groups, i.e.,  $-\text{OCH}_2\text{CH}_2-$ . See instantly claimed *m* and *n* excerpts in claim 1. In column 5, lines 32-59, Linares *et al.* disclose where the compositions of the invention may optionally include a hair or skin moisturizer.

Linares *et al.* fail to disclose specifically a liquid crystal base, as required by claim 6, comprising pentaerythritol derivatives in the amount of 10 to 70 weight percent, or the pentaerythritol derivatives represented by the formula 1. However, Mitsuno *et al.* disclose, in reference claim 1, a lamella, or plate-like, type, single phase liquid crystal composition for cleansing human skin, comprising: (a) 10 to 20 wt % of one or more hydrophilic non-ionic surfactants, (b) 5 to 15 wt % of one or more water-soluble substances having at least one hydroxyl group, (c) 30 to 80% of at least one oil substance which is liquid at normal temperature, and (d) 5 to 30 wt % of water. In column 2, lines 30-44, Mitsuno *et al.* disclose wherein the water-soluble substance having a hydroxyl group may be pentaerythritol, and wherein the incorporation amount of the water-soluble substance may vary according to the intended feel on use, viscosity and the like of the final formulation, and may generally be 1 to 50%, based on the

weight of the total composition. Mitsuno *et al.* disclose, in column 3, lines 5-9, that the liquid crystal composition of the invention is prepared by blending a hydrophilic non-ionic surfactant, a water-soluble substance having a hydroxyl group in a molecule thereof, an oil substance and water in such a range that will form a liquid crystal of a single phase.

Neither Linares *et al.* nor Mitsuno *et al.* specifically discloses the pentaerythritol derivatives represented by the formula 1; however, when the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimal degree of ethoxylation by routine experimentation. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) and MPEP §2144.05(II). In addition, Yokoyama *et al.* recites in the right column of page 421, lines 31-41 of text, and Tables 1 and 2, a process of adjusting the amount of alditol, an acyclic polyol, and/or hydroxyl groups to determine the degradation rate, for example. Therefore, the determination of the optimum characterization of the composition would have been a matter well within the purview of one of ordinary skill in the art, at the time of the invention, through no more than routine experimentation. Furthermore, a skilled artisan would have envisaged a skin moisturizer or liquid crystal base composition comprising pentaerythritol derivatives, as disclosed by Linares *et al.* and Mitsuno *et al.*, respectively. One of ordinary skill in the art would have been motivated to combine the teachings of the aforementioned references when seeking a cosmetic with improved stability, together with excellent moisturizing performance and mildness. It would have been obvious to one of ordinary

skill in the art, at the time of the invention, because the combined teachings of the prior art are fairly suggestive of the claimed invention.

Accordingly, the instant invention, as claimed in claims 1, 6 and 7, is *prima facie* obvious over the combination of the aforementioned teachings.

### ***Conclusion***

No claims allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NELSON C. BLAKELY III whose telephone number is (571) 270-3290. The examiner can normally be reached on Mon - Thurs, 7:00 am - 5:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phyllis G. Spivack/  
Primary Examiner, Art Unit 1614  
February 11, 2009

/N. C. B. III/  
Examiner, Art Unit 1614

